

Appl. No. 10/711,412
Amdt. dated August 23, 2005
Reply to Office action of June 30, 2005

REMARKS/ARGUMENTS

Regarding amendments to the claims:

Claims 1 and 20 are amended to overcome the objections set forth on the following detailed Office action and to emphasize the characteristics of the claimed invention. No
5 new matter is entered by the above amendments.

Regarding rejections under 35 U.S.C. 103:

Examiner:

- 10 1. Claims 1, 2, 4-20, and 22-37 are rejected under 35 U.S.C 103(a) as being anticipated by Chang et al (US Pat. 6537854).

Chang et al shows in Fig. 5, an IC chip 30 having a plurality of conduction pads (not labeled), a substrate 34 having a second conductive pad part 24, and a plurality of bumps
15 36 formed of a series of conductive connection parts 42 comprising a first and second part having insulation weaved there through and forming a first and second insulation part 44. Chang et al also teaches that said metal part maybe formed of gold, use of ACF films, and use of light isolating material such as polyimide for said insulating parts. Additionally, a monolithically formed structure and use of cylindrical post or columns are also taught by
20 Chang et al, in which the columns are often hollow. Moreover, Chang et al teaches that his device is applicable to liquid crystal display (LCD).

Response:

- 25 Claims 1 and 20 are amended to overcome this rejection. According to the amended claim 1, the claimed invention teaches a conductive structure comprising an

Appl. No. 10/711,412
Amdt. dated August 23, 2005
Reply to Office action of June 30, 2005

integrated circuit, a substrate, and a plurality of bumps positioned between the integrated circuit and the substrate, in which at least one of the bumps includes a first conductive part connected to the integrated circuit at one end, a second conductive part connected to the integrated circuit at one end, a conductive connection part connecting the first
5 conductive part and the second conductive part, a first insulation part surrounding the first conductive part and the second conductive part, and a second insulation part positioned between the first conductive part and the second conductive part. Preferably, the height of the first conductive part and the second conductive part is $H1$, the height of the conductive connection part is $H2$, the height of the first insulation part is $H3$, and $H1 \leq$
10 $H3 \leq H1+H2$. According to the amended claim 20, the claimed invention also teaches a liquid crystal display comprising a substrate, a liquid crystal display region positioned in the center of the substrate, an integrated circuit positioned on the edge of the substrate, a plurality of bumps positioned in between the substrate and the integrated circuit for electrically connecting the integrated circuit, and an anisotropic conductive film for
15 providing an electrical connection between the bumps and the substrate, in which the plurality of bumps further includes a first conductive part connected to the integrated circuit at one end, a second conductive part connected to the integrated circuit at one end, a conductive connection part connecting the first conductive part and the second
20 conductive part, a first insulation part surrounding the first conductive part and the second conductive part, and a second insulation part positioned in between the first conductive part and the second conductive part. Preferably, the height of the first conductive part and the second conductive part is $H1$, the height of the conductive connection part is $H2$, the height of the first insulation part is $H3$, and $H1 \leq H3 \leq H1+H2$.

25 In contrast to the claimed invention, Chang et al and the applicant's prior art never address the height difference between the conductive parts, the conductive connection part, and the insulation part. Since the conductive structure taught by Chang et al and the applicant's prior art are significantly different from the one taught by the claimed

Appl. No. 10/711,412
Amdt. dated August 23, 2005
Reply to Office action of June 30, 2005

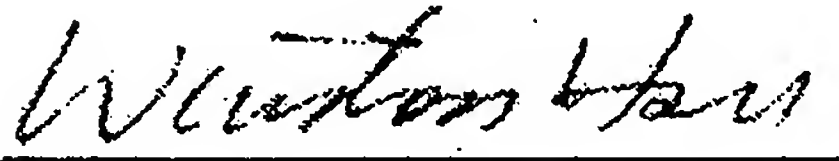
invention, the amended claims 1 and 20 should be allowed. Since claims 2, 4-19 and 22-37 are depended upon claims 1 and 20, claims 2, 4-19 and 22-37 should be allowed if claims 1 and 20 are allowed. Reconsideration of the amended claims 1, 2, 4-20 and 22-37 is politely requested.

5

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Sincerely yours,

10

Date: August 23, 2005

Winston Hsu, Patent Agent No. 41,526

P.O. BOX 506, Merrifield, VA 22116, U.S.A.

Voice Mail: 302-729-1562

15 Facsimile: 806-498-6673

e-mail : winstonhsu@naipo.com

Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 12 hours behind the Taiwan time, i.e. 9 AM in D.C. = 9 PM in Taiwan.)

20